

جدول (2-4): تحليل التباين لتجارب تصميم المربع اللاتيني

S.O.V	d.f	S.S	M.S	E.M.S		F
				Fixed model	Random model	
Rows	(r-1)	$SSR = \sum \frac{Y_{i..}^2}{r} - \frac{(Y_{..})^2}{r^2}$	$MSR = \frac{SSR}{(r-1)}$	$\sigma_e^2 + \frac{r \sum R_i^2}{(r-1)}$	$\sigma_e^2 + r\sigma_R^2$	$\frac{MSR}{MSE}$
Columns	(r-1)	$SSC = \sum \frac{Y_{.j}^2}{r} - \frac{(Y_{..})^2}{r^2}$	$MSC = \frac{SSC}{(r-1)}$	$\sigma_e^2 + \frac{r \sum C_j^2}{(r-1)}$	$\sigma_e^2 + r\sigma_C^2$	$\frac{MSC}{MSE}$
Treatment	(r-1)	$SSt = \sum \frac{Y_{(k).}^2}{r} - \frac{(Y_{..})^2}{r^2}$	$MSt = \frac{SSt}{(r-1)}$	$\sigma_e^2 + \frac{r \sum T_k^2}{(r-1)}$	$\sigma_e^2 + r\sigma_T^2$	$\frac{MSt}{MSE}$
Error	(r-2) (r-1)	$SSE = SST - SSR - SSC - SSt$	$MSE = \frac{SSE}{(r-1)(r-2)}$			
Total	(r ² -1)	$SST = \sum y_{ij(k)}^2 - \frac{(Y_{..})^2}{r^2}$				